Lesson 10-5 Graphing Square Root Functions

For real numbers, the value of the radicand cannot be negative. So the domain of a square root function is limited to values of x for which the radicand is greater than or equal to 0.

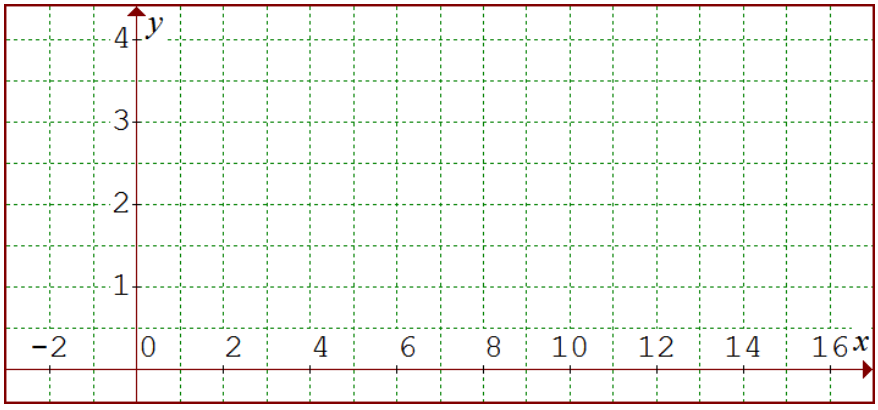
Problem 1 Finding the Domain of a Square Root Function

What is the domain of the function $y = 2\sqrt{3x - 9}$?

Got It? 1. What is the domain of $y = \sqrt{-2x + 5}$?

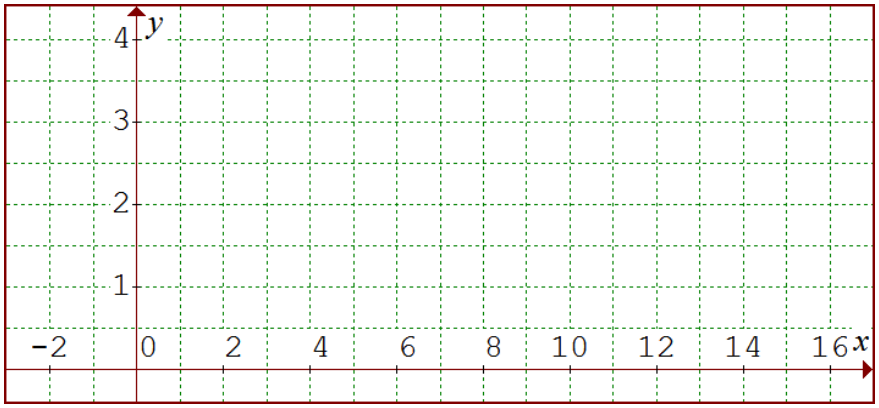
Problem 2 Graphing a Square Root Function

Make a table and graph the function $y = \sqrt{x}$



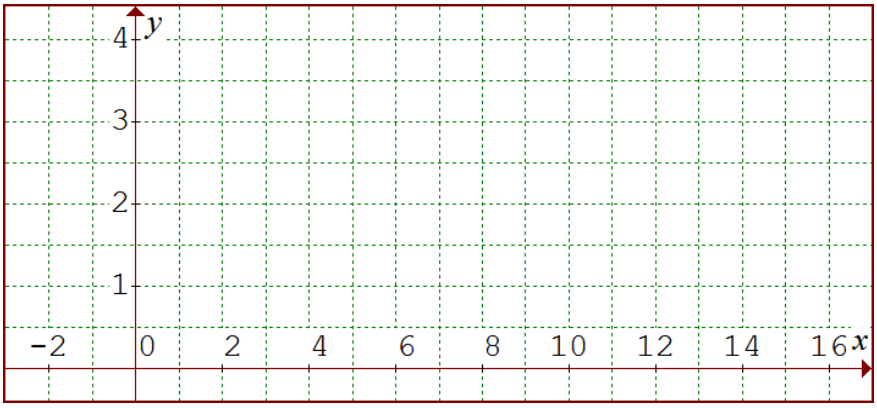
Problem 3 Graphing a Vertical Translation

What is the graph of $y = \sqrt{x} + 2$?



Problem 4 Graphing a Horizontal Translation

What is the graph of $y = \sqrt{x + 3}$?



Find the domain of each function.

7. $y = \frac{1}{2}\sqrt{x}$

9. $y = \sqrt{x-7}$

12. $y = \sqrt{4x-13}$

13. $y = \frac{4}{7}\sqrt{18-x}$

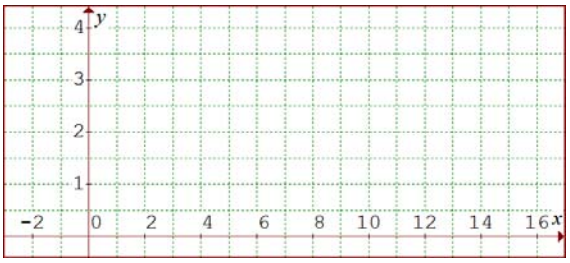
Make a table of values and graph each function.

16. $y = \sqrt{2x}$

x	
y	

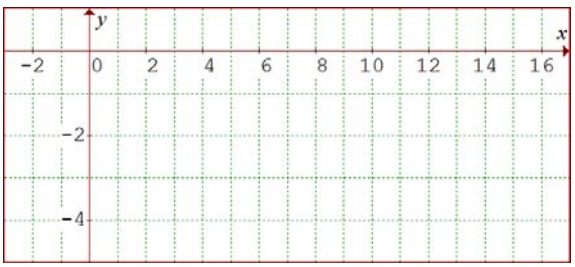
17. $f(x) = 4\sqrt{x}$

x	
y	



21. $y = -3\sqrt{x}$

x	
y	



22. $f(x) = \frac{1}{3}\sqrt{x}$

x	
y